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L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:696029 CAPLUS

DN 137:217789

ED Entered STN: 13 Sep 2002

TI Production of crosslinked melamine resin-colloidal silica shell-core composite spherical particles

IN Ozawa, Masaaki; Yoshida, Akira

PA Nissan Chemical Industries, Ltd., Japan .

SO PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM C08G012-32

ICS C08J003-12

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002070576	A1	20020912	WO 2002-JP1633	20020222 <--
	W: KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	JP 2002327036	A2	20021115	JP 2002-45613	20020222
	EP 1371672	A1	20031217	EP 2002-700726	20020222
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	TW 593387	B	20040621	TW 2002-91103462	20020226
	US 2004010114	A1	20040115	US 2003-616965	20030711
PRAI	JP 2001-57589	A	20010302		
	WO 2002-JP1633	W	20020222		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 2002070576	ICM	C08G012-32
	ICS	C08J003-12
EP 1371672	ECLA	C08G012/32; C08L061/28

AB Title process for production of microspheres with controllable diameter over a broad range of from the submicron to micron scale comprises (A) reaction of melamine compds. with aldehydes under basic conditions in an aqueous suspension of colloidal silica having average diameter of 5-70 nm to give a water-soluble primary condensate; (B) precipitation of crosslinked melamine resin composite spherical particles by adding acidic catalysts; and (C) optionally cover-up of the spheres with inorg. fine particles. Thus, melamine 50.0, 37% formalin 96.5, and aqueous silica sol Snowtex S 26.7, and water 720 g were mixed together, adjusted with ammonia, reacted at 70° for 30 min, added with dodecylbenzenesulfonic acid, to precipitate crosslinked melamine particles of average diameter 0.24  $\mu\text{m}$ .

ST crosslinked melamine resin colloidal silica composite spherical particle prodn

IT Aminoplasts

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(as shell in production of crosslinked melamine resin-colloidal silica shell-core composite spherical particle)

IT Microspheres

(prepared by covering colloidal silica core with melamine resin shell)

IT 104-15-4, p-Toluenesulfonic acid, uses 27176-87-0,

Dodecylbenzenesulfonic acid

RL: CAT (Catalyst use); USES (Uses)

(as catalyst in production of crosslinked melamine resin-colloidal silica shell-core composite spherical particle)

IT 188653-13-6, Snowtex S 188653-14-7, Snowtex ZL

RL: TEM (Technical or engineered material use); USES (Uses)

(as core in production of crosslinked melamine resin-colloidal silica shell-core composite spherical particle)

IT 9003-08-1P, Formalin-melamine copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

*Famby*

(as shell in production of crosslinked melamine resin-colloidal silica shell-core composite spherical particle)

IT 7631-86-9, Snowtex N, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(colloidal; as core in production of crosslinked melamine resin-colloidal silica shell-core composite spherical particle)

IT 1314-60-9, A 1550

RL: MOA (Modifier or additive use); USES (Uses)  
(for cover-up of crosslinked melamine resin-colloidal silica shell-core composite spherical particle)

IT 7664-41-7, Ammonia, uses

RL: NUU (Other use, unclassified); USES (Uses)  
(in production of crosslinked melamine resin-colloidal silica shell-core composite spherical particle)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Nippon Shokubai Kagaku Kogyo Co Ltd; JP 62068811 A 1987 CAPLUS

(2) Nl Industries Inc; US 3845006 A 1974 CAPLUS

(3) Nl Industries Inc; US 3846453 A 1974 CAPLUS

(4) Toa Gosei Kagaku Kogyo Kabushiki Kaisha; JP 04175351 A 1992 CAPLUS

(5) Unitika Ltd; JP 62010126 A 1987 CAPLUS